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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Minoru Yonezawa

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EXAMINER

DANIELSEN, NATHAN ANDREW

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/603,989	YONEZAWA, MINORU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nathan Danielsen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Claims 1-19 are pending.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

3. The drawings are objected to because, in figure 14, ST37...ST47 should be replaced with an encircled A, such as the one shown as the "Yes" output of ST36 and the input to ST37 in figure 15. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The abstract of the disclosure is objected to because "controls" in line 8 should be --control--. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

5. Claims 1, 10 and 11 are objected to because "portion, with a laser beam or receives reflected wave," in claim 1 should be --portion with a laser beam, receives a reflected wave,--. A similar correction should be made in claims 10 and 11. Additionally, claim 1 is objected to because "a rotation control portion controls" should be --a rotation control portion which controls--. Claim 5 is objected to because "from the optical disk with by optical head" should be --from the optical disk with the optical head-- or something similar. Claims 6 and 16 are objected to because the phrase "on the side of the optical head" should be changed to --closest to the optical head--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 17 recite the limitation "the boundary line". There is insufficient antecedent basis for this limitation in these claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-4, 8, 10-14, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ono et al (US Patent 6,996,046; hereinafter Ono).

Regarding claims 1, 10, and 11, Ono discloses an optical disk apparatus (and associated method) comprising:

a rotation control portion which controls rotating of an optical disk having an information recording layer (col. 3, lines 42-47 and figure 1);

an optical head which irradiates the optical disk which is rotated by the rotation control portion, with a laser beam or receives reflected wave, and performs recording processing or reproducing processing (figure 1);

a waiting position decision portion which detects physical properties of each region in the optical disk after the recording processing or reproducing processing is finished, and decides a waiting position of the optical head according to the physical properties (system controller 12 in figures 1 and 3); and

a control portion which controls a position of the optical head according to the waiting position decided by the waiting position decision portion in order to move the optical head to wait (col. 7, lines 1-35 and figure 4).

Regarding claims 2 and 12, Ono discloses where the waiting position decision portion detects physical properties of each region in the optical disk from the reflected wave from the optical disk by the optical head, and distinguishes the information recording layer into an unrecorded region

and a recorded region where the recording processing has been performed on the basis of the detection (col. 7, lines 1-35 and figure 4).

Regarding claims 3 and 13, Ono discloses where the waiting position decision portion detects physical properties of each region in the optical disk from the reflected wave from the optical disk by the optical head, distinguishes the information recording layer into an unrecorded region and a recorded region where the recording processing has been performed on the basis of the detection, and decides the waiting position at a position before a boundary line of the unrecorded region by a predetermined amount toward the side of the recorded region (col. 7, lines 1-35 and figure 4).

Regarding claims 4 and 14, Ono discloses where the waiting position decision portion detects physical properties of each region in the optical disk from the reflected wave from the optical disk with the optical head, and distinguishes the information recording layer into an unrecorded region and a recorded region where the recording processing has been performed on the basis of the detection, recognizes the recordable region where recording processing can be performed in the recorded region when the unrecorded region is absent, and decides the waiting position before the recordable region (col. 7, lines 1-35 and figure 4).

Regarding claims 8 and 18, Ono discloses where, after the waiting position decision portion detects physical properties of each region in the optical disk from the reflected wave from the optical disk by the optical head, and decides an unrecorded region in which the optical head waits or a recorded region where the recording processing has been performed on the basis of the detection, the waiting position decision portion decides the waiting position on an inner radius side of the unrecorded region or recordable region, when the optical disk has a track structure in which the recording is performed from an inner radius to an outer radius, and decides the waiting position on an outer radius side of the unrecorded region or recordable region, when the optical disk has the track structure in which the recording is performed from the outer radius to the inner radius (col. 7, lines 1-35 and figure 4; where Ono is silent to the specific direction of recording of data; however, Ono teaches that the optical head must be moved to a position before the boundary between

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recorded and unrecorded region, which is a more inner radius when recording from inside to out and which is a more outer radius when recording from outside to in).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono, in view of Maeda et al (US Patent 5,420,838; hereinafter Maeda).

Regarding claims 5 and 15, Ono discloses everything claimed, as applied to claims 1 and 11. Additionally, Ono discloses where the waiting position decision portion and the control portion detect physical properties of each region in the optical disk from the reflected wave from the optical disk with the optical head, distinguish the information recording layer into an unrecorded region and a recorded region where the recording processing has been performed on the basis of the detection, and further decide the waiting position at a position before a boundary line of the unrecorded region by a first predetermined amount toward the side of the recorded region so as to move the optical head (col. 7, lines 1-35 and figure 4). However, Ono fails to disclose where the waiting position decision portion and the control portion decide the waiting position at a position before the boundary line of the unrecorded region by a second predetermined amount when an instruction of the recording processing or the reproducing processing is absent after a predetermined time interval so as to move the optical head.

In the same field of endeavor, Maeda discloses where the waiting position decision portion and the control portion decide the waiting position at a position before the boundary line of the unrecorded region by a second predetermined amount when an instruction of the recording

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processing or the reproducing processing is absent after a predetermined time interval so as to move the optical head (col. 34, line 65 through col. 35, line 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have moved the optical head to a second waiting position while waiting for a command to resume recording/reproducing processing, as taught by Maeda, for the purpose of rerecording data with complete overlapping (col. 35, lines 10-17).

12. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono, in view of Ito et al (US Patent 5,881,032; hereinafter Ito).

Regarding claims 6 and 16, Ono discloses everything claimed, as applied to claims 1 and 11. However, Ono fails to disclose where, when the unrecorded region is present in each of a plurality of recording layers of the optical disk, the waiting position decision portion gives priority to the unrecorded region located in the recording layer on the side of the optical head, and decides the waiting position at a position before a boundary line of the unrecorded region by a predetermined amount toward the side of the recorded region.

In the same field of endeavor, Ito discloses where, when the unrecorded region is present in each of a plurality of recording layers of the optical disk, the waiting position decision portion gives priority to the unrecorded region located in the recording layer on the side of the optical head, and decides the waiting position at a position before a boundary line of the unrecorded region by a predetermined amount toward the side of the recorded region (col. 8, lines 64-66 and figure 1D where, ideally, the first layer would be filled before starting to record data on a second (or subsequent) layer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have given priority to the unrecorded region in the layer closest to the optical head, as taught by Ito, for the purpose of being able to continuously reproduce data from a recording medium (col. 4, lines 32-46).



13. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono, in view of Itoi (US Patent 5,995,458).

Regarding claims 7 and 17, Ono discloses everything claimed, as applied to claims 1 and 11. Additionally, Ono discloses where the waiting position is at a position before the boundary line of the unrecorded region by a predetermined amount toward the side of the recorded region (col. 7, lines 1-35 and figure 4). However, Ono fails to disclose where, when the unrecorded region is present in each of a groove and a land of the optical disk, the waiting position decision portion gives priority to the unrecorded region located in the recording layer of the groove.

In the same field of endeavor, Itoi discloses where, when the unrecorded region is present in each of a groove and a land of the optical disk, the waiting position decision portion gives priority to the unrecorded region located in the recording layer of the groove (col. 9, lines 37-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have given waiting position priority to an unrecorded groove, as taught by Itoi, for the purpose of realizing high density recording and high speed search at the same time with a single head (col. 2, lines 21-24).

14. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (US Patent Application Publication 2002/0044507; hereinafter Hagiwara).

Regarding claims 9 and 19, Ono discloses everything claimed, as applied to claims 1 and 11. However, Ono fails to disclose where the optical disk has a multi-zone format and where the optical head waits for the velocity to be changed before recording in another zone.

In the same field of endeavor, Hagiwara discloses where the rotation control portion separately controls rotational speed of a plurality of zones provided in the optical disk, when a first zone including the waiting position is different from a second zone where the optical head performs recording processing or reproducing processing, the rotation control portion causes the optical head

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to wait at the waiting position while the rotation control portion controls the optical disk so as to rotate the optical disk at rotational speed according to the second zone (§ 38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have caused the optical head to wait for the velocity to be changed before recording in another zone, as taught by Hagiwara, for the purpose of achieving a stable quality of data recording (§ 38).

***Closing Remarks/Comments***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen  
08/03/2006

  
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